Amendment To The Claims

The listing of claims will replace all prior versions, and listings of claims in the application.

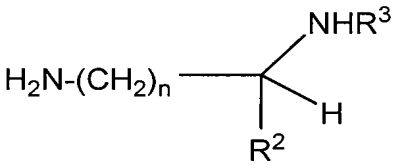
1 - 120 (canceled)

121. (new) A parenteral pharmaceutical formulation comprising a pharmaceutically acceptable base addition salt of a boronic acid of formula (VIII):

X-(R)-Phe-(S)-Pro-(R)-Mpg-$B(OH)_2$ (VIII),

wherein X is R^6-$(CH_2)_p$-C(O)-, R^6-$(CH_2)_p$-$S(O)_2$-, R^6-$(CH_2)_p$-NH-C(O)- or R^6-$(CH_2)_p$-O-C(O)-, wherein p is 0, 1, 2, 3, 4, 5 or 6 and R^6 is H or a 5 to 13-membered cyclic group which is unsubstituted or substituted by 1, 2 or 3 substituents selected from halogen; amino; nitro; hydroxy; a C_5-C_6 cyclic group; C_1-C_4 alkyl and C_1-C_4 alkyl containing, or linked to the cyclic group through, an in-chain O atom, the aforesaid alkyl groups optionally being substituted by a substituent selected from halogen, amino, nitro, hydroxy and a C_5-C_6 cyclic group,

wherein the salt in the parenteral pharmaceutical formulation is a salt of the boronic acid with an alkali metal, an aminosugar, a guanidine or an amine of formula (XI):



(XI)

where n is from 1 to 6, R^2 is H, carboxylate or derivatised carboxylate, R^3 is H, C_1-C_4 alkyl or a residue of a natural or unnatural amino acid.

122. (new) The parenteral pharmaceutical formulation of claim 121, wherein X is R^6-$(CH_2)_p$-O-C(O)- and p is 0 or 1.

123. (new) The parenteral pharmaceutical formulation of claim 121, wherein R^6 is a 6-membered cyclic group that is unsubstituted and p is 1.

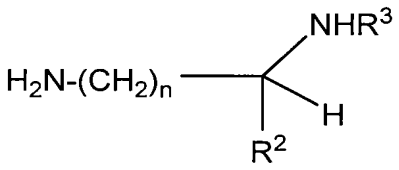
124. (new) The parenteral pharmaceutical formulation of claim 121, wherein the salt is an alkali metal salt.

125. (new) The parenteral pharmaceutical formulation of claim 124, wherein the alkali metal salt is a sodium salt.

126. (new) The parenteral pharmaceutical formulation of claim 121, wherein the formulation comprises a salt of the boronic acid with an aminosugar.

127. (new) The parenteral pharmaceutical formulation of claim 121, wherein the formulation comprises a salt of the boronic acid with a guanidine.

128. (new) The parenteral pharmaceutical formulation of claim 121, wherein the formulation comprises a salt of the boronic acid with an amine of formula (XI):



(XI)

where n is from 1 to 6, R^2 is H, carboxylate or derivatised carboxylate, R^3 is H, C_1-C_4 alkyl or a residue of a natural or unnatural amino acid.

129. (new) The parenteral pharmaceutical formulation of claim 121, wherein the formulation is an aqueous solution comprising the salt.

130. (new) The parenteral pharmaceutical formulation of claim 129, wherein the aqueous solution further comprises a tonicity agent.

131. (new) The parenteral pharmaceutical formulation of claim 121, which comprises the boronic acid in the form of an anhydride.

132. (new) The parenteral pharmaceutical formulation of claim 121, wherein the boronic acid is of the formula Cbz-(R)-Phe-(S)-Pro-(R)- boroMpg-OH, boroMpg-OH being a residue of an aminoboronic acid of the formula H_2N-CH($(CH_2)_3$OMe)B$(OH)_2$, and wherein the formulation comprises anhydride species of the acid.

133. (new) The parenteral pharmaceutical formulation of claim 121 wherein the boronic acid is of the formula Cbz-(R)-Phe-(S)-Pro-(R)- Mpg-B$(OH)_2$.

134. (new) The parenteral pharmaceutical formulation of claim 121, wherein the salt is an alkali metal salt of Cbz-(R)-Phe-(S)-Pro-(R)-Mpg-B$(OH)_2$.

135. (new) The parenteral pharmaceutical formulation of claim 134, wherein the salt is a sodium salt of Cbz-(R)-Phe-(S)-Pro-(R)-Mpg-B$(OH)_2$.

136. (new) The parenteral pharmaceutical formulation of claim 121, further comprising at least one cardiovascular treatment agent selected from the group consisting of a lipid-lowering drug, an anti-oxidant, a GP IIb/IIIa antagonist, an aldosterone inhibitor, an adenosine A2 antagonist, an adenosine A3 agonist, a beta-

blocker, acetylsalicylic acid, a loop diuretic, an ACE inhibitor, an antithrombotic agent with a different mechanism of action from the salt of formula (VIII), an antiplatelet agent, a thromboxane receptor inhibitor, a synthetase inhibitor, a fibrinogen receptor antagonist, a prostacyclin mimetic, a phosphodiesterase inhibitor, an ADP-receptor (P_2T) antagonist, a thrombolytic, and a COX-2 inhibitor, and combinations thereof.

137. (new) The parenteral pharmaceutical formulation of claim 121, wherein the salt is a sodium salt of a boronic acid of the formula Cbz-(R)-Phe-(S)-Pro-(R)-Mpg-$B(OH)_2$, and wherein the salt is in an aqueous solution.

138. (new) The parenteral pharmaceutical formulation of claim 135 wherein the salt is the monosodium salt and the formulation either is an aqueous solution or is in solid form for making up into an aqueous solution for administration.

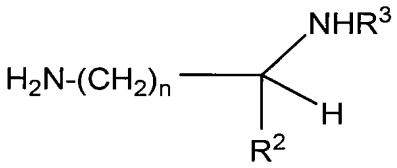
139. (new) A pharmaceutical product comprising a sealed container containing in the form of a finely divided solid, ready for reconstitution to form a liquid parenteral formulation, a pharmaceutically acceptable base addition salt of a boronic acid of formula (VIII), wherein the boronic acid is pharmaceutically active:

X-(R)-Phe-(S)-Pro-(R)-Mpg-$B(OH)_2$ (VIII),

wherein X is R^6-$(CH_2)_p$-C(O)-, R^6-$(CH_2)_p$-$S(O)_2$-, R^6-$(CH_2)_p$-NH-C(O)- or R^6-$(CH_2)_p$-O-C(O)-, wherein p is 0, 1, 2, 3, 4, 5 or 6 and R^6 is H or a 5 to 13-membered cyclic group which is unsubstituted or substituted by 1, 2 or 3 substituents selected from halogen; amino; nitro; hydroxy; a C_5-C_6 cyclic group; C_1-C_4 alkyl and C_1-C_4 alkyl

containing, or linked to the cyclic group through, an in-chain O atom, the aforesaid alkyl groups optionally being substituted by a substituent selected from halogen, amino, nitro, hydroxy and a C_5-C_6 cyclic group,

wherein the salt in the pharmaceutical product is a salt of the boronic acid with an alkali metal, an aminosugar, a guanidine or an amine of formula (XI):



(XI)

where n is from 1 to 6, R^2 is H, carboxylate or derivatised carboxylate, R^3 is H, C_1-C_4 alkyl or a residue of a natural or unnatural amino acid.

140. (new) The pharmaceutical product of claim 139, wherein X is R^6-$(CH_2)_p$-O-C(O)- and p is 0 or 1.

141. (new) The pharmaceutical product of claim 139, wherein R^6 is a 6-membered cyclic group that is unsubstituted and p is 1.

142. (new) The pharmaceutical product of claim 141, wherein the salt is an alkali metal salt.

143. (new) The pharmaceutical product of claim 142, wherein the alkali metal salt is a sodium salt.

144. (new) The pharmaceutical product of claim 139, wherein the boronic acid is of the formula Cbz-(R)-Phe-(S)-Pro-(R)- Mpg-$B(OH)_2$.

145. (new) The pharmaceutical product of claim 139, wherein the salt is an alkali metal salt of Cbz-(R)-Phe-(S)-Pro-(R)-Mpg-$B(OH)_2$.

146. (new) The pharmaceutical product of claim 145, wherein the salt is a sodium salt of Cbz-(R)-Phe-(S)-Pro-(R)-Mpg-$B(OH)_2$.

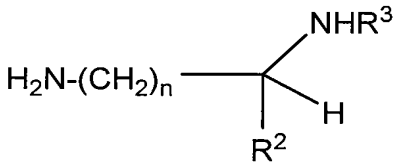
147. (new) The pharmaceutical product of claim 146 wherein the salt is a monosodium salt.

148. (new) A method of treating thrombosis, comprising parenterally administering to a mammal suffering from, or at risk of suffering from, thrombosis a therapeutically effective amount of a composition comprising a pharmaceutically acceptable base addition salt of a boronic acid of formula (VIII):

X-(R)-Phe-(S)-Pro-(R)-Mpg-$B(OH)_2$ (VIII),

wherein X is R^6-$(CH_2)_p$-C(O)-, R^6-$(CH_2)_p$-$S(O)_2$-, R^6-$(CH_2)_p$-NH-C(O)- or R^6-$(CH_2)_p$-O-C(O)-, wherein p is 0, 1, 2, 3, 4, 5 or 6 and R^6 is H or a 5 to 13-membered cyclic group which is unsubstituted or substituted by 1, 2 or 3 substituents selected from halogen; amino; nitro; hydroxy; a C_5-C_6 cyclic group; C_1-C_4 alkyl and C_1-C_4 alkyl containing, or linked to the cyclic group through, an in-chain O atom, the aforesaid alkyl groups optionally being substituted by a substituent selected from halogen, amino, nitro, hydroxy and a C_5-C_6 cyclic group,

wherein the salt is a salt of the boronic acid with an alkali metal, an aminosugar, a guanidine or an amine of formula (XI):



(XI)

where n is from 1 to 6, R^2 is H, carboxylate or derivatised carboxylate, R^3 is H, C_1-C_4 alkyl or a residue of a natural or unnatural amino acid.

149. (new) The method of claim 148, wherein X is R^6-$(CH_2)_p$-O-C(O)- and p is 0 or 1.

150. (new) The method of claim 148, wherein R^6 is a 6-membered cyclic group that is unsubstituted and p is 1.

151. (new) The method of claim 148, wherein the salt is an alkali metal salt.

152. (new) The method of claim 148, wherein the alkali metal salt is a sodium salt.

153. (new) The method of claim 148, wherein the boronic acid is of the formula Cbz-(R)-Phe-(S)-Pro-(R)- Mpg-$B(OH)_2$.

154. (new) The method of claim 148, wherein the salt is an alkali metal salt of Cbz-(R)-Phe-(S)-Pro-(R)-Mpg-$B(OH)_2$.

155. (new) The method of claim 154, wherein a salt is the sodium salt of Cbz-(R)-Phe-(S)-Pro-(R)-Mpg-$B(OH)_2$.

156. (new) The method of claim 148, wherein the formulation is administered intravenously.

157. (new) The method of claim 148, further comprising co-administering at least one additional cardiovascular treatment agent selected from the group consisting of a lipid-lowering drug, an anti-oxidant, a GP IIb/IIIa antagonist, an aldosterone inhibitor, an adenosine A2 antagonist, an adenosine A3 agonist, a beta-blocker, acetylsalicylic acid, a loop diuretic, an ACE inhibitor, an antithrombotic agent with a different mechanism of action from the salt of formula (VIII), an antiplatelet agent, a thromboxane receptor inhibitor, a synthetase inhibitor, a fibrinogen receptor antagonist, a prostacyclin mimetic, a phosphodiesterase inhibitor, an ADP-receptor (P_2T) antagonist, a thrombolytic, and a COX-2 inhibitor, and combinations thereof.

158. (new) The method of claim 155 wherein the composition comprises an aqueous solution of the salt.

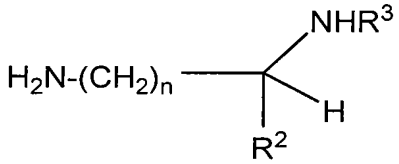
159. (new) A pharmaceutical formulation adapted for parenteral administration, whether directly or after combining with a liquid, and the pharmaceutical formulation comprising:

a) a first component selected from the group consisting of (i) a boronic acid of formula (VIII) below, (ii) boronate ions of the boronic acid of formula (VIII) below, and (iii) an equilibrium form of the boronic acid of formula (VIII) below and boronate ions of the boronic acid of formula (VIII) below, and (iv) combinations thereof:

X-(R)-Phe-(S)-Pro-(R)-Mpg-$B(OH)_2$ (VIII),

wherein X is R^6-$(CH_2)_p$-C(O)-, R^6-$(CH_2)_p$-$S(O)_2$-, R^6-$(CH_2)_p$-NH-C(O)- or R^6-$(CH_2)_p$-O-C(O)-, wherein p is 0, 1, 2, 3, 4, 5 or 6 and R^6 is H or a 5 to 13-membered cyclic group which is unsubstituted or substituted by 1, 2 or 3 substituents selected from halogen; amino; nitro; hydroxy; a C_5-C_6 cyclic group; C_1-C_4 alkyl and C_1-C_4 alkyl containing, or linked to the cyclic group through, an in-chain O atom, the aforesaid alkyl groups optionally being substituted by a substituent selected from halogen, amino, nitro, hydroxy and a C_5-C_6 cyclic group; and

(b) a second, pharmaceutically acceptable, component selected from the group consisting of alkali metal ions, aminosugars, guanidines and amines of formula (XI):



(XI)

where n is from 1 to 6, R^2 is H, carboxylate or derivatised carboxylate, R^3 is H, C1-C4 alkyl or a residue of a natural or unnatural amino acid.

160. (new) The pharmaceutical formulation of claim 159 wherein X is R_6-(CH_2)p-C(O)-, R_6 is a 6-membered cyclic group that is unsubstituted and p is 1.

161. (new) The pharmaceutical formulation of claim 160 wherein the second component is N-methyl-D-glucamine.

162. (new) The pharmaceutical formulation of claim 160 wherein the second component is L-lysine.

163. (new) The pharmaceutical formulation of claim 160 wherein the second component is L-arginine.

164. (new) The pharmaceutical formulation of claim 160 wherein the second component is lithium.

165. (new) The pharmaceutical formulation of claim 160 wherein the second component is potassium.

166. (new) The pharmaceutical formulation of claim 160 wherein the second component is sodium.

167. (new) The pharmaceutical formulation of claim 159 wherein the boronic acid is of the formula Cbz-(R)-Phe-(S)-Pro-(R)- Mpg-$B(OH)_2$.

168. (new) The pharmaceutical formulation of claim 166 wherein the boronic acid is of the formula Cbz-(R)-Phe-(S)-Pro-(R)- Mpg-$B(OH)_2$.